

United States
Department of
Agriculture

Forest
Service

Entomology
and Pathology

2500 S. Pine Knoll Dr.
Flagstaff, AZ 86001
FAX: (520) 556-2130

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Date: August 8, 1997

Subject: 1997 Insect and Disease Aerial Detection Survey

To: Superintendent, Grand Canyon National Park

The annual insect and disease aerial detection survey was conducted over the Grand Canyon National Park July 28-31, 1997 by Entomology and Pathology observers. Enclosed you will find maps depicting the forest pest conditions. Following is a summary of the results of this survey.

Ponderosa pine mortality caused by Ips beetles and western pine beetle decreased from 1995.

Mountain pine beetle mortality does appear to be increasing on the Grand Canyon National Park. Mortality is concentrated around "The Basin" and Kanabowmits Lookout on the Kaibab plateau. Approximately 10,012 acres (2151 acres in 1996) of ponderosa pine mortality attributable to this insect was detected. Mountain pine beetle mortality on the North Kaibab Ranger District is lower this year than previous years.

Significant mortality continues in the true firs along, and south of, Big Ridge on the North Kaibab Ranger District. 899 acres of mortality was mapped this year. This mortality appears to be slowly working its way south into the east/west canyons on the east side of the plateau. White fir and subalpine fir are both being affected. We feel this mortality continues to be caused by a complex of Annosus root disease, Scolytus beetles, and western balsam bark beetles.


Defoliation of aspen decreased in acreage, with mainly low intensity activity, this season. Most of the defoliation was mapped on the Kaibab plateau. Forest and national park wide, 909 acres sustained low levels of defoliation. The defoliation is probably attributable to large aspen tortrix and black leaf spot, Marssonina populi. Seasonal defoliations caused by these agents are rarely fatal to the aspen unless they become protracted and chronic.

Defoliation from western spruce budworm was detected in low levels this year on the south end of the North Kaibab Ranger District. 1087 acres were affected.

Mortality of significant numbers of pinyon pine is occurring across the state this season. Approximately 4409 acres of mortality was detected this year on the Kaibab National Forest, 2516 acres on the Tusayan district. We believe this mortality is being caused by the drought stress on the trees from last season which were subsequently attacked by the pinyon ips, Ips confusus.

Due to air safety concerns we will be discontinuing our aerial surveys of the south rim of the Grand Canyon. Low level aerial observation in and around the Grand canyon airport is becoming hazardous. We will continue to conduct aerial surveys for the north rim and look forward to coordinating these missions with you.

An electronic format copy of this information is available to you for incorporation with GIS. Should you desire a copy of the electronic formatted data, or have any questions regarding this survey, or need additional information, please feel free to contact Michelle Frank (520) 556-2072 or Steve Dudley at (520) 556-2071. Thank you.

 Acting
Borys Tkacz
Zone Leader
Arizona Zone Entomology and Pathology